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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,581	03/27/2002	Masaru Sakamoto	KIN60USA	2534

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EXAMINER

ZIMMERMAN, JOHN J

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 04/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,581

Applicant(s)

SAKAMOTO ET AL.

Examiner

John J. Zimmerman

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 6) <input type="checkbox"/> Other: |

FIRST OFFICE ACTION

Priority

1. The Preliminary Amendment filed in this application has been entered. Claims 1-2 are pending in this application.

Information Disclosure Statement

2. The Information Disclosure Statement filed in this application has been considered. An initialed form PTO-1449 is enclosed with this Office Action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Art Unit: 1775

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(a) as being anticipated by Kataoka (European Application 0966318A2).

5. Kataoka discloses forming a copper particulate layer of preferably 0.5-1.0 μm thickness on an organic release layer surface of a copper foil substrate and optionally further adding a thin covering layer (e.g. see Figure 1, paragraphs [0039], [0040], Table 1, Example 1). Laser drilling is disclosed (e.g. paragraph [0040]). In any event, regarding the "intended use" language in the claims ("for use in laser beam drilling"), a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

6. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohara (U.S. Patent 5,482,784).

7. Ohara discloses forming a layer of copper nodules on a copper foil surface. The nodules preferably have a diameter of 0.2-0.8 μm and a further thin layer of rust prevention treatment can be applied (e.g. see column 3, lines 53-62; column 4, lines 20-26; Example 1). Regarding the

Art Unit: 1775

"intended use" language in the claims ("for use in laser beam drilling"), a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

8. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshioka (U.S. Patent 6,541,126).

9. Yoshioka discloses forming a layer of copper microparticles on a copper foil surface. The microparticles preferably have a size between 0.01-5.0 μm (e.g. see column 3, lines 54-64; column 4, lines 9-19) and a further sealing layer and a passivation layer can be applied (e.g. see column 5, lines 61-66; column 10, lines 9-48). Laser drilling is disclosed (e.g. see column 6, lines 41-54; column 12, lines 47-53). In any event, regarding the "intended use" language in the claims ("for use in laser beam drilling"), a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Art Unit: 1775

10. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Fatcheric (U.S. Patent 5,679,230), Lee (U.S. Patent 5,908,544), Tagusari (U.S. Patent 5,858,517) or Tagusari (EP 0785295 A1).

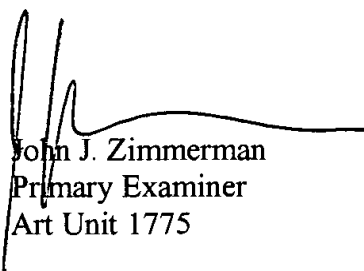
11. Fatcheric discloses forming a layer of copper micro nodules on a copper foil surface. The micro nodules preferably have a diameter of around 0.5 μm (e.g. see column 3, lines 21-24) and a further thin encapsulation layer can be applied (e.g. see column 4, line 59 - column 5, line 20: Claims 1-18). Lee discloses forming a layer of copper nodules on a copper foil surface. The layer preferably has a thickness of between 1 and 3 microns and has a further thin stabilization layer (e.g. see paragraph spanning columns 4 and 5). Tagusari (U.S. Patent 5,858,517) and Tagusari (EP 0785295 A1) disclose forming a layer of copper nodules on a copper foil surface. The example layers have thicknesses falling in the claimed range of between 0.01 and 3 microns (e.g. see Table 1) and has further thin treatment over layers (e.g. see claim 3). Regarding the "intended use" language in the claims ("for use in laser beam drilling"), a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Art Unit: 1775

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Of particular note, see Gaku (U.S. Patent 6,337,463) and Kono (U.S. Patent 6,346,678) since these references further establish the level of ordinary skill in the art with regards to using layers specifically adapted for laser drilling of copper foils.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (703) 308-2512. The examiner can normally be reached on 8:30am-5:00pm, M-F. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
April 18, 2003